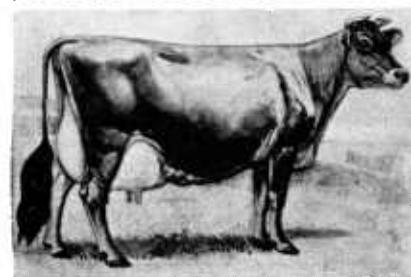
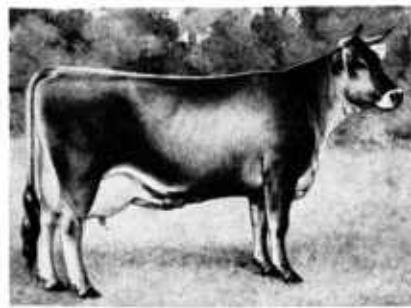
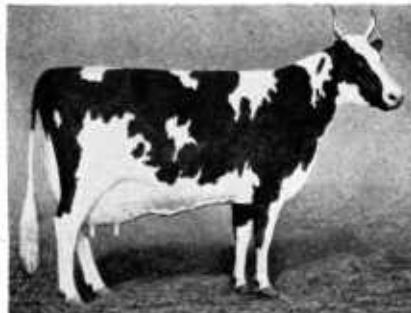


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Dairy Cattle Breeds

Farmers'
Bulletin
No. 1443



U. S. DEPARTMENT OF AGRICULTURE

SEVERAL BREEDS of cattle in the United States are recognized as dairy breeds. Although much alike in what is known as general dairy conformation, these breeds differ to some extent in certain characteristics. What these characteristics are, the factors to consider in selecting a breed, and the history of the origin and development of the breeds are questions of interest to both the beginner and the established breeder of dairy cattle. These are the topics discussed in this bulletin.

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Washington, D. C.

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DAIRY CATTLE BREEDS

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DAIRY CATTLE IN THE UNITED STATES

ABOUT 38,300,000 cattle of all ages were being kept for dairy purposes in the United States on January 1, 1948, according to estimates made by the United States Department of Agriculture. This number includes over 25 million cows and heifers 2 years old and older kept for milk, slightly more than 12 million younger heifers and heifer calves being kept for milk cows, and about 1 million bulls and bull calves of the major dairy breeds.

Some 70 percent of all cattle kept for dairy purposes, or about 26,800,000, were cattle of the five major dairy breeds, namely: Ayrshire, Brown Swiss, Guernsey, Holstein-Friesian, and Jersey. This number includes both registered animals and grade animals with characteristics of one breed predominating. Of the other 30 percent, about 7,100,000, or 18½ percent, were cattle of dual purpose or beef breeding kept mainly for milking; and about 4,400,000, or 11½ percent, were mostly cattle of mixed breeding with characteristics of no one breed predominating although a few were cattle of minor dairy breeds.

The number of cows kept for dairy purposes in the various States, on January 1 for selected years from 1928 to 1948, is shown in table 1.

Of the 26,800,000 cattle of the major dairy breeds, about 1,773,150, or 6.6 percent, are registered. Much of the improvement in our dairy cattle will continue to come from increasing the number of good registered animals and through the use of good registered bulls in grade dairy herds. The development of good grade dairy herds from cows of no particular breed can be accomplished in a few generations by the use of good registered dairy bulls. For these reasons, registered dairy cattle have played in the past and will play in the future a very important role in the dairy industry of the Nation.

TABLE 1.—Number of milk cows and heifers 2 years old and older kept for milk, by States, January 1, for selected years from 1928 to 1948¹

State and division	1928	1934	1938	1941	1945	1947	1948
	<i>Thou-sands</i>						
Maine	138	156	139	134	135	131	132
New Hampshire	75	87	78	76	76	74	73
Vermont	279	295	293	302	308	302	296
Massachusetts	136	134	139	141	142	138	132
Rhode Island	20	22	23	22	23	22	22
Connecticut	102	122	124	128	131	123	123
New York	1, 306	1, 416	1, 373	1, 428	1, 484	1, 439	1, 439
New Jersey	117	129	142	150	158	158	158
Pennsylvania	820	895	860	879	1, 000	1, 000	990
North Atlantic	2, 993	3, 256	3, 171	3, 260	3, 457	3, 387	3, 365
Ohio	904	1, 060	1, 002	1, 032	1, 138	1, 082	1, 071
Indiana	686	828	733	769	848	798	774
Illinois	987	1, 221	1, 109	1, 122	1, 203	1, 120	1, 086
Michigan	775	912	905	969	1, 080	1, 048	1, 017
Wisconsin	1, 940	2, 226	2, 157	2, 289	2, 585	2, 559	2, 508
East North Central	5, 292	6, 247	5, 906	6, 181	6, 854	6, 607	6, 456
Minnesota	1, 525	1, 893	1, 688	1, 756	1, 843	1, 698	1, 579
Iowa	1, 368	1, 610	1, 455	1, 484	1, 483	1, 366	1, 270
Missouri	826	1, 097	934	963	1, 115	1, 007	975
North Dakota	504	701	496	562	583	488	444
South Dakota	557	675	477	519	529	447	411
Nebraska	676	820	629	623	642	554	514
Kansas	760	967	709	749	807	697	655
West North Central	6, 216	7, 763	6, 388	6, 656	7, 002	6, 257	5, 848
Delaware	34	35	34	36	40	38	38
Maryland	177	190	190	204	227	232	232
Virginia	360	416	399	425	474	460	469
West Virginia	202	260	239	236	243	234	229
North Carolina	294	378	340	348	400	376	376
South Carolina	160	186	170	170	190	179	179
Georgia	333	411	369	362	395	399	395
Florida	92	106	110	120	133	148	148
South Atlantic	1, 652	1, 982	1, 851	1, 901	2, 102	2, 066	2, 066
Kentucky	496	595	551	566	655	622	616
Tennessee	450	584	541	581	666	640	627
Alabama	359	457	397	401	471	448	435
Mississippi	412	581	547	525	620	572	543
Arkansas	364	528	454	486	536	484	445
Louisiana	256	298	322	335	379	368	342
Oklahoma	623	838	718	796	885	765	704
Texas	1, 105	1, 461	1, 444	1, 430	1, 594	1, 453	1, 351
South Central	4, 065	5, 342	4, 974	5, 120	5, 806	5, 352	5, 063

¹ Estimated by John L. Wilson, Bureau of Agricultural Economics.

TABLE 1.—*Number of milk cows and heifers 2 years old and older kept for milk, by States, January 1, for selected years from 1928 to 1948—Continued.*

State and division	1928	1934	1938	1941	1945	1947	1948
	Thousands						
Montana-----	183	215	144	162	165	147	134
Idaho-----	170	214	202	232	274	239	234
Wyoming-----	70	78	68	68	69	65	60
Colorado-----	257	300	235	237	246	224	215
New Mexico-----	67	81	74	79	75	62	60
Arizona-----	35	49	46	47	51	46	47
Utah-----	100	115	100	105	126	117	115
Nevada-----	20	22	20	22	20	20	20
Washington-----	270	332	335	362	380	346	336
Oregon-----	216	275	267	265	284	251	243
California-----	625	660	685	756	859	912	903
Western-----	2, 013	2, 341	2, 176	2, 335	2, 549	2, 429	2, 367
United States-----	22, 231	26, 931	24, 466	25, 453	27, 770	26, 098	25, 165

WHAT IS A DAIRY BREED?

Cattle in the United States may be divided into four groups, namely, dairy, beef, dual purpose, and mixed or native. Strictly speaking, all cattle are dual purpose, for they all secrete milk to nourish their calves and all may be slaughtered and their flesh used for food. To a limited extent in this country, cattle are used also as beasts of burden.

“Breeds” of cattle result from efforts of herd owners to change their animals in succeeding generations, through selection and mating, to suit particular needs or fancies. The term “dairy breed” refers to the cattle that are especially well suited to the prolonged production of a quantity of milk well in excess of that required for nourishing their own calves. Such breeds represent the efforts of cattle breeders for many generations toward fixing in the inheritance of their cattle definite characteristics such as size, color, and type of the animals, as well as the quantity and quality of milk produced and persistency of production.

As a result, the inherent ability of dairy cattle to produce milk is greater than that of any of the other classes or groups of cattle named above. This inheritance usually is transmitted to the offspring. Thus, the mating of a “dairy” animal with an animal from one of the other cattle groups usually produces an offspring that is superior to the nondairy parent in milk-producing ability and also in other dairy characteristics.

A “registered” dairy animal is one that has met the requirements for registration set by the organization which sponsors a particular dairy breed and is recorded in the register of such organization. A “grade” is the offspring resulting from the mating of a registered bull with a native cow or one of mixed inheritance, or from mating animals

not registered but having near ancestors that are registered. The offspring of a registered animal and a grade is also a grade, and through progressive use of registered bulls such animals become high grade. The names of the breeds (Ayrshire, Brown Swiss, etc.) may refer to either registered or grade animals; and to prevent misunderstanding it is desirable to precede the breed name with the word "registered" or "grade."

In addition to the breeds of dairy cattle mentioned, cows of other breeds, including both the beef and dual purpose, are kept for dairy purposes. These are discussed in Farmers' Bulletin 1779, Beef-Cattle Breeds for Beef and for Beef and Milk.

REGISTRATION

To be eligible for registration a dairy animal must be by a sire and from a dam which are recorded by name and number in a register of the breed, commonly called the herdbook. The animal must also meet certain color qualifications and other requirements for registration which are laid down by the various breed organizations. Copies of these rules may be obtained by writing to the associations concerned, as listed on page 32. The number of dairy cattle registered in the United States each year, 1933-47, by breeds, is shown in table 2.

TABLE 2.—*Number of dairy cattle registered each year, by breeds, in the United States, 1933-47*

Year	Ayrshire	Brown Swiss	Guernsey	Holstein-Friesian	Jersey	Total
1933	8,972	4,510	29,994	98,523	35,456	177,455
1934	17,436	9,112	34,762	100,218	38,578	200,106
1935	13,854	6,420	45,037	76,885	48,222	190,418
1936	14,107	7,490	51,493	77,942	43,312	194,344
1937	14,103	8,566	50,312	79,110	43,682	195,773
1938	13,753	8,642	47,534	81,622	44,925	196,476
1939	15,198	9,996	53,889	85,598	47,100	211,781
1940	16,237	10,473	56,860	145,423	48,527	277,520
1941	17,014	12,819	59,600	102,803	60,543	252,779
1942	17,713	14,019	63,674	106,624	71,821	273,851
1943	20,027	16,257	75,521	111,197	54,160	277,162
1944	20,755	17,494	74,231	122,910	56,471	291,861
1945	21,517	18,804	76,897	113,446	51,150	281,814
1946	22,169	20,958	80,612	169,338	49,271	342,348
1947	30,046	23,137	91,279	152,739	86,376	383,577

In addition to the herd register, each breed association also maintains a supplemental register of performance called the "Official Test." The Official Test provides two systems of production testing for breeders of registered dairy cattle. They are: (1) Advanced Registry testing (called Register of Production by the Brown Swiss association and Register of Merit by the Jersey association), and (2) Herd Improvement Registry testing.

In the Advanced Registry, a breeder may enter one or more selected cows at any time for lactation records of either 305 or 365 days or both.

The Herd Improvement Registry provides breeders with a method of testing the entire herd. This test is for 1 year and may be started on the first of any month.

Requirements for admission to the foregoing registers are given in the Uniform Rules for Official Testing published by the Purebred Dairy Cattle Association, whose address is given on page 32.

WHICH BREED TO SELECT

Sometimes too much emphasis is given to the question of which breed to choose and too little to the matter of getting good individuals—that is, those that are well bred and are high producers. There are three points, however, that should be considered in deciding which breed to select. These are (1) the breed that predominates in the locality where the new herd is to be located, (2) personal preference, and (3) market requirements for the product.

THE BREED THAT PREDOMINATES

A dairyman just starting with registered animals should as a rule select the same breed as his neighbors. It is difficult for an isolated small breeder to dispose of his surplus stock to advantage, while if there are many breeders with the same breed, buyers are attracted to the locality because of the better chance of getting the desired animals from one or more of the several breeders.

There are other advantages to a dairyman in having the same breed as his neighbor, such as the possibility of exchanging bulls and of owning good registered bulls cooperatively. These advantages are obtained by those having grade herds as well as by those with registered cows. Then there is also the opportunity for taking advantage of special breed sales of surplus stock, and, lastly, the advantage of bringing the community together in other endeavors which usually result where there is but one breed.

REGIONAL DIFFERENCES IN BREED PREFERENCES

There are sharp differences in the breed of dairy cattle preferred by farmers in the various parts of the country. In general, the percentage of Jerseys averages highest in the South and in areas where most of the farmers sell cream. Holsteins are most numerous in sections where the milk is sold largely for making cheese or evaporated milk, but there are also large numbers in the large herds kept in the principal market-milk areas. Guernseys are most numerous in the main dairy States, the numbers kept in market-milk areas depending in part on the differential paid for milk of high color and high test. Ayrshires and Brown Swiss are distributed somewhat as are Guernseys, but there are relatively few in the South and West. Shorthorns kept for milk are most numerous where beef production is important, chiefly in the central and western portions of the Corn Belt and in the Great Plains area.

PERSONAL PREFERENCE

In a district where no breed is established, or in sections where several breeds are about equally represented, the prospective breeder must

be guided largely by his personal preference. A person usually takes a liking to one breed, for reasons not easily explainable. Naturally, he would take more interest in caring for animals of that breed than for those of a breed that he does not like so well.

Personal preference, however, must not overshadow the matter of quality of individual animals. If high-producing individuals of the breed not so well liked are available at reasonable cost, and individuals of the same quality of the breed well liked are not available except at a much higher cost, it may be wiser to select the former, for usually a dairyman soon begins to like a breed with which he is doing well.

MARKET REQUIREMENTS FOR PRODUCT

Market requirements for the product should not be overemphasized in selecting the breed. For a time a dairyman may sell his product in a market where low-testing milk has the advantage, while later conditions may change, and a high-testing milk will sell to better advantage. Obviously, a breeder cannot shift from one breed to another to meet the fluctuations in market demands.

When one is selling to a city milk plant, however, the price paid for the extra butterfat over the basic test, or deducted from the standard price when the milk is below basic test, may well be considered in selecting the breed. The point here is that sometimes in some milk markets the differential may favor high-testing milk, and at other times or in other markets it may favor low-testing milk.

In summing up the matter of which breed to select, this point should be kept in mind—there are good cows and poor cows in all breeds and, other things being equal, the breeder or dairyman who gets good individuals to begin with and who takes proper care of the animals and the milk will have a good chance for success no matter what breed he selects.

THE SCORE CARD

A score card for dairy cows and one for dairy bulls were adopted by the Purebred Dairy Cattle Association and approved by the American Dairy Science Association in 1943. The purpose of the score card is to teach beginners the art of judging and also to describe for breeders and others the type of animals considered ideal for each of the breeds. These score cards, which are shown in part on pages 8 and 9, show arbitrary values or scores for the various points of conformation and thus emphasize the ones requiring special attention by breeders. The breed characteristics for each of the breeds are discussed on subsequent pages in this bulletin.

On the back of the score card is a diagram which gives the names and the location of the various parts or points of conformation of the animal. Figure 1 is a copy of the diagram on the back of the dairy cow score card. A similar diagram appears on the back of the dairy bull score card. These cards also show on the reverse side the ideal types in natural colors of all five breeds, illustrating both bulls and cows. Copies of these cards may be obtained by writing to the Purebred Dairy Cattle Association.

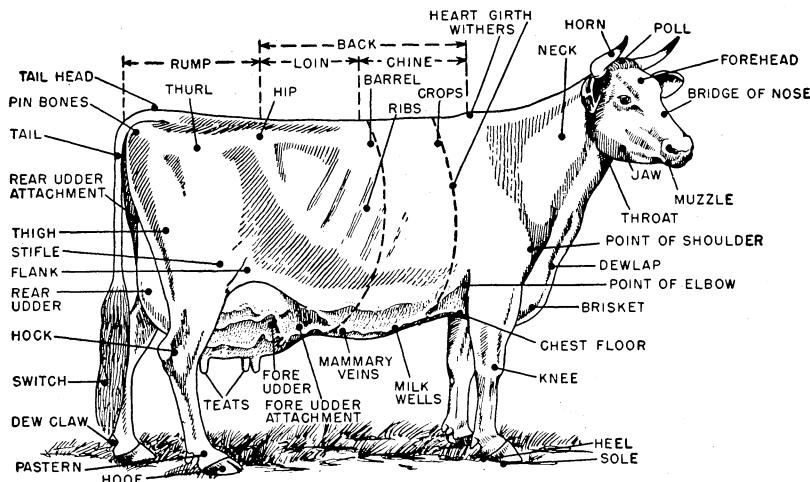


FIGURE 1.—Diagram of cow, showing names and location of parts.

EVALUATION OF DEFECTS

The score card for cows also gives the following instructions on how to evaluate the defects found on the animal being judged:

In a show ring, disqualification means that the animal is not eligible to win a prize. Any disqualified animal is not eligible to be shown in the group classes. In slight to serious discrimination, the degree of seriousness shall be determined by the judge.

Eyes

1. Total blindness: *Disqualification.*
2. Blindness in one eye: *Slight discrimination.*

Wry face

Serious discrimination.

Parrot jaw

Slight to serious discrimination.

Shoulders

Winged: Slight to serious discrimination.

Capped hip

Slight discrimination.

Tail setting

Wry tail or other abnormal tail settings: Slight to serious discrimination.

Legs and feet

1. Lameness—apparently permanent and interfering with normal function: *Disqualification.*
—apparently temporary and not affecting normal function: *Slight discrimination.*
2. Bucked knees, blemished hocks, crooked hind legs, weak pasterns: *Serious discrimination.*
3. Evidence of arthritis, crampy hind leg: *Serious discrimination.*
4. Enlarged knees: *Slight discrimination.*

DAIRY COW SCORE CARD

Based on Order of Observation		Perfect Score
1. GENERAL APPEARANCE		30
<i>Attractive individuality, revealing vigor, femininity with a harmonious blending and correlation of parts. Impressive style and attractive carriage with a graceful walk.</i>		
BREED CHARACTERISTICS (see below)	12	
HEAD—medium in length, clean-cut; broad muzzle with large open nostrils; lean, strong jaw; full, bright eyes; forehead broad between the eyes and moderately dished; bridge of nose straight; ears medium size and alertly carried.		
SHOULDER BLADES set smoothly against chest wall and withers, forming neat junction with the body.		
BACK strong and appearing straight with vertebrae well defined.		
LOIN broad, strong and nearly level.		
RUMP long, wide; top-line level from loin to and including tail head.	10	
HIPS wide, approximately level laterally with back, free from excess tissue		
THURS wide apart.		
PIN BONES wide apart and slightly lower than hips, well defined.		
TAIL HEAD slightly above and neatly set between pin bones.		
TAIL long and tapering with nicely balanced switch.		
LEGS wide apart, squarely set, clean-cut and strong with fore legs straight.		
HIND LEGS nearly perpendicular from hock to pastern. When viewed from behind, legs wide apart and nearly straight. Bone, flat and flinty, tendons well defined	8	
Pasterns, of medium length, strong and springy. Hocks cleanly moulded.		
FEET short and well rounded, with deep heel and level sole.		
2. DAIRY CHARACTER		20
<i>Animation, angularity, general openness, and freedom from excess tissue, giving due regard to period of lactation.</i>		
NECK long and lean, blending smoothly into shoulders and brisket; clean-cut throat and dewlap.		
WITHERS well defined and wedge-shaped with the dorsal processes of the vertebrae rising slightly above the shoulder blades.	20	
RIBS wide apart. Rib bone wide, flat and long		
FLANK deep, arched and refined.		
THIGHS incurving to flat from the side; wide apart when viewed from the rear, providing sufficient room for the udder and its attachment.		
SKIN of medium thickness, loose, and pliable. Hair fine.		
3. BODY CAPACITY		20
<i>Relatively large in proportion to size of animal, providing ample digestive capacity, strength and vigor.</i>	12	
BARREL deep, strongly supported, ribs wide apart and well sprung; depth and width tending to increase toward rear of barrel.		
HEART GIRTH large, resulting from long, well sprung foreribs, wide chest floor between front legs, and fullness at the point of elbow.	8	
4. MAMMARY SYSTEM		30
<i>A capacious, strongly attached, well carried udder of good quality, indicating heavy production and a long period of usefulness.</i>		
UDDER—CAPACITY and SHAPE, long, wide and of moderate depth. Extending well forward, strongly attached, reasonably level floor. Rear attachment, high and wide. Quarters evenly balanced and symmetrical.	25	
TEXTURE soft, pliable and elastic. Well collapsed after milking.		
TEATS uniform, of convenient length and size, cylindrical in shape, free from obstructions, well apart and squarely placed, plumb.		
MAMMARY VEINS long, tortuous, prominent and branching, with numerous large wells. Veins on udder numerous and clearly defined.	5	
TOTAL		100

DAIRY BULL SCORE CARD

Based on Order of Observation		Perfect Score
1. GENERAL APPEARANCE		30
<i>Attractive individuality, revealing vigor, masculinity with a harmonious blending and correlation of parts. Impressive style and attractive carriage with an active, well balanced walk.</i>		20
BREED CHARACTERISTICS (see below)		
HEAD masculine, medium in length, clean-cut; broad muzzle with large open nostrils; lean, strong jaw; full, bright eyes; forehead broad between the eyes and moderately dished; bridge of nose straight; ears medium size and alertly carried.		
SHOULDER BLADES set smoothly against chest wall and withers, forming neat junction with the body.		
BACK strong and appearing straight with vertebrae well defined.		
LOIN broad, strong and nearly level.		
RUMP long, wide; top-line level from loin to and including tail head.		10
HIPS wide, approximately level laterally with back, free from excess tissue.		
THURLS wide apart.		
PIN BONES wide apart and slightly lower than hips, well defined.		
TAIL HEAD slightly above and neatly set between pin bones.		
TAIL long and tapering with nicely balanced switch.		
2. DAIRY CHARACTER		35
<i>Animation, angularity, general openness, and freedom from excess tissue.</i>		
NECK masculine and long, with moderate crest blending smoothly into shoulders. Clean-cut throat, brisket and dewlap.		
WITHERS well defined and wedge-shaped with the dorsal processes of the vertebrae rising slightly above the shoulder blades.		
RIBS well arched, wide apart, rib bone flat, wide and long.		
FLANKS arched and refined.		
THIGHS when viewed from the side, flat; when viewed from the rear, wide apart. Well cut-up between the thighs.		35
SKIN of medium thickness, loose and pliable. Hair fine.		
TESTICLES both normal. Scrotum normal.		
RUDIMENTARY TEATS wide apart, squarely placed and in front of scrotum.		
MAMMARY VEINS large, long and well defined.		
3. BODY CAPACITY		20
<i>Relatively large in proportion to size of animal, and deep at the flank, providing ample digestive capacity, strength and vigor.</i>		10
BARREL deep, strongly supported, ribs wide apart, and well sprung.		
HEART GIRTH large, resulting from long, well sprung foreribs, wide chest floor between front legs, and fullness at the point of elbow.		10
4. LEGS AND FEET		15
FORE LEGS medium in length, straight, wide apart, squarely placed. Feet short, and well rounded, with deep heel and level sole.		5
HIND LEGS when viewed from the side, nearly perpendicular from hock to pastern. When viewed from the rear, legs wide apart and nearly straight. Bone, flat and flinty, tendons well defined. Pasterns, of medium length, strong, and springy. Hocks cleanly moulded. Feet same as above.		10
	TOTAL	100

Absence of horns*No discrimination.***Lack of size***Slight to serious discrimination.***Udder**

1. One or more blind quarters: *Disqualification.*
2. Abnormal milk (bloody, clotted, watery): *Possibly disqualification. A slight to serious defect.*
3. Udder definitely broken away in attachment: *Serious discrimination.*
4. A weak udder attachment: *Slight to serious discrimination.*
5. One or more light quarters, hard spots in udder, side leak or obstruction in teat (spider): *Slight to serious discrimination.*

Dry cows*In case of cows of apparently equal merit: Give preference to cows in milk.***Overconditioned***Serious discrimination.***Temporary or minor injuries***Blemishes or injuries of a temporary character not affecting animal's usefulness: Slight discrimination.***Evidence of sharp practice**

1. Animals showing signs of having been operated upon or tampered with for the purpose of concealing faults in conformation, or with intent to deceive relative to the animal's soundness: *Disqualification.*
2. Heifer calves showing evidence of having been milked in an attempt to deceive regarding natural form of udder: *Serious discrimination.*

A comparison of the score card for bulls with the score card for cows shows minor differences, such as in the parts relating to masculinity as contrasted with mammary development in cows. Otherwise the two score cards are the same. (See pp. 8, 9.)

AYRSHIRE

ORIGIN AND HISTORY

The Ayrshire breed originated in southwestern Scotland, in the county of Ayr, in the latter part of the eighteenth century. Doubtless cattle from several neighboring countries were used in the formation of the breed, though there is no record of direct foreign importations to the county of Ayr at that time. While this foreign blood probably had a good effect on the ultimate value of the breed, the substantial and efficient development of the breed seems to have come about mostly through subsequent judicious selection and mating.

IMPORTATION AND DISTRIBUTION

The first importation of Ayrshires into the United States occurred in 1822. Since then Ayrshires have been imported almost every year, either from Scotland or from Canada. It is estimated that on January 1, 1948, there were approximately 148,900 living registered Ayrshires in the United States,¹ but the total number (registered and

¹This figure has been calculated from yearly registrations, allowances for deaths being estimated.

grade) is not known. Ayrshires are scattered through practically all of the States, though by far the largest numbers are in the North-eastern States.

GENERAL CHARACTERISTICS

The score cards for bulls and cows adopted by the Purebred Dairy Cattle Association describe the Ayrshire characteristics as follows:

Color.—Red of any shade, mahogany, brown or these with white, or white, each color clearly defined. Distinctive red and white markings preferable; black or brindle markings strongly objectionable.

Size.—A mature cow in milk should weigh about 1,150 pounds and a mature bull in breeding condition 1,800 pounds.

Horns should incline upward, small at base, refined, medium length and tapering toward tips.

The Ayrshire (figs. 2, 3, and 4) has a well-built, stocky body, not heavily covered with flesh, but giving the appearance of possessing great vigor and vitality. The calves weigh from 60 to 80 pounds at birth. The cows are noted for their symmetrical udders, which usually extend well forward and are attached high behind with no tendency to be pendent. The quarters of the udder are generally even; the teats medium in size and well-placed.

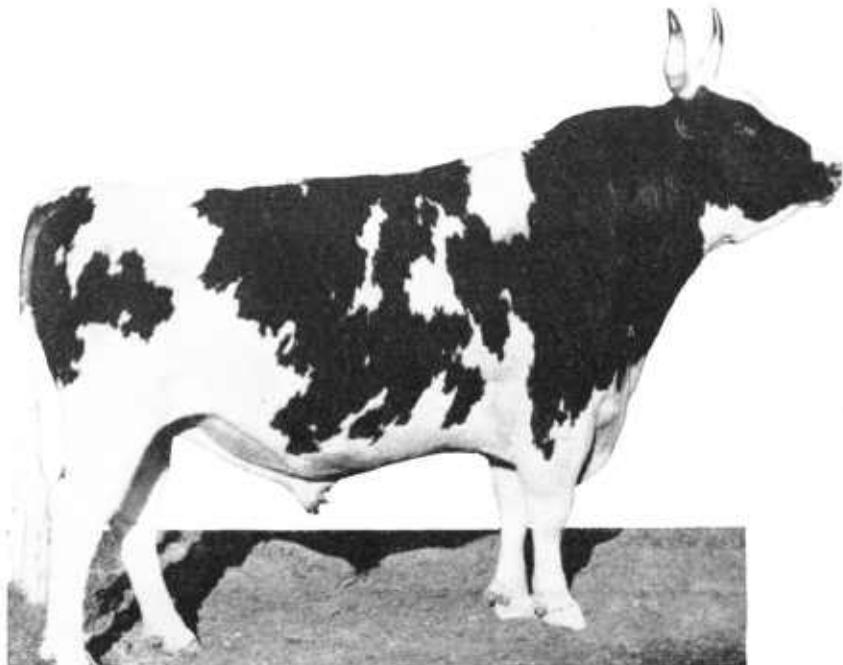


FIGURE 2.—Ayrshire bull, Netherball Swanby Dan 58641, Grand Champion, Dairy Cattle Congress, 1947.

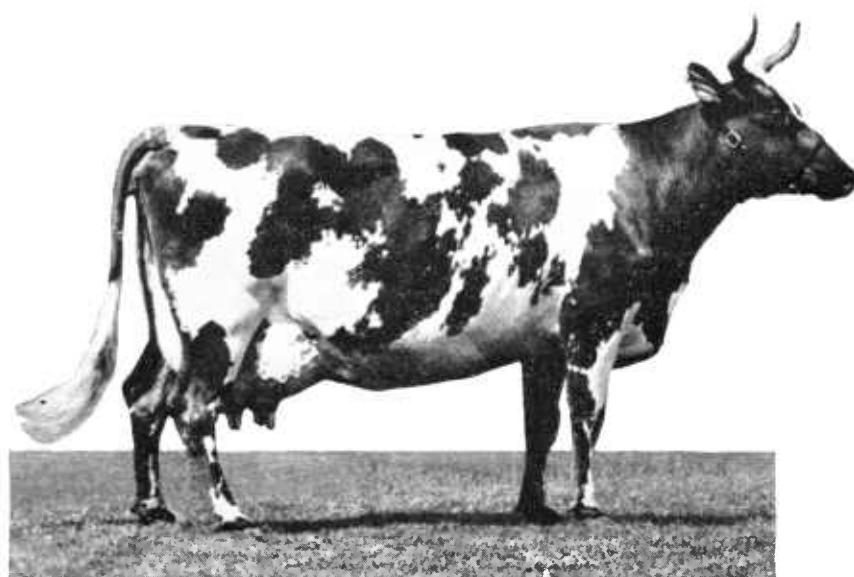


FIGURE 3.—Ayrshire cow, Cacapon Nita by Caesar 148107. Highest butterfat producer of the breed in the United States.

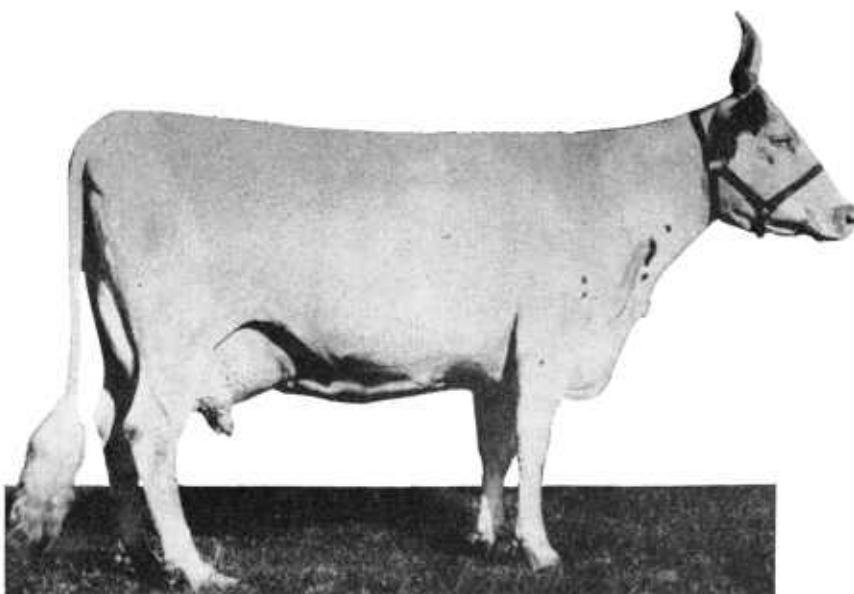


FIGURE 4.—Ayrshire cow, Garelaugh May Mischief 27944. Highest milk producer of the breed in the United States.

PRODUCTION

Ayrshire milk contains about 4 percent of butterfat, which is about average for all the dairy breeds. No Ayrshires have been tested under Advanced Registry testing since January 1, 1941, but up to that time Ayrshire cows and heifers had completed 7,129 records averaging 10,469 pounds of milk and 416 pounds of butterfat per cow, with an average test of 3.98 percent.

Under herd-test rules, Ayrshire cows and heifers had completed 66,554 records up to January 1, 1948, with an average production of 9,016 pounds of milk and 367.8 pounds of butterfat, with a test of 4.08 percent. The 10 highest milk records and the 10 highest butterfat records made by Ayrshire cows up to January 1, 1948, under herd-test rules are given in table 3.

TABLE 3.—*The 10 highest milk records and the 10 highest butterfat records made by Ayrshire cows, under Herd-Test rules, up to January 1, 1948*

MILK

Cow	Age when record began		Days milked	Daily milkings	Production
	Yr.	Mo.			
Virgie Vedette Storrs 227253-----	6	9	305	3	22, 691
Vi's Bountiful Lassie 58096-----	9	9	305	4	21, 211
Woodhill Star Ethel 170210-----	6	5	305	(1)	20, 793
Jewell of Grant Farm 100832-----	8	0	305	(2)	20, 349
Virgie Vedette Storrs 227253-----	5	9	305	3	20, 163
Cacapon Nita by Caesar 148107-----	7	8	305	3	20, 115
Scantic Lady Rose 138337-----	8	4	305	3	20, 086
Sycamore Kathada 149222-----	7	11	305	2	19, 866
Clove Branch Odette P 233146-----	6	6	305	2	19, 855
Alta Crest Jonquil 191992-----	9	0	305	2	19, 660

BUTTERFAT

Strathglass Brown Peg 200949-----	8	11	305	2	874
Cacapon Nita by Caesar 148107-----	7	8	305	3	873
Laneway Spottie's Mistress 230908-----	6	4	305	2	848
Par's Red Shelia 177636-----	10	11	305	2	844
Virgie Vedette Storrs 227253-----	5	9	305	3	839
Clove Branch Odette P 233146-----	5	5	305	2	838
Virgie Vedette Storrs 227253-----	6	9	305	3	833
Alta Crest Jonquil 191992-----	9	0	305	2	832
Scantic Lady Rose 138337-----	7	3	305	(3)	805
Sycamore Adabelle 168133-----	5	5	305	2	804

¹ Milked 3 times a day for 230 days; twice a day for 75 days.

² Milked 3 times a day for 274 days; twice a day for 31 days.

³ Milked 3 times a day for 300 days; twice a day for 5 days.

BULLS

Table 4 lists 10 registered Ayrshire bulls that were proved in dairy-herd-improvement associations and reported in the Bureau of Dairy Industry proved-sire lists, published by the United States Department of Agriculture up to January 1, 1948. For a bull to be considered for inclusion in this table, he must have met the following requirements:

(1) He must have had 10 or more unselected daughters with production records, whose dams also had production records.

(2) His daughters must have had an average 305-day butterfat production which exceeded that of the dams by 25 or more pounds.

Records of the daughters and of their dams were converted where necessary to a twice-a-day milking, 6-year-old basis, and if a cow had more than one record, the average of all her records was taken.

From the sires that met these conditions the 10 whose daughters average the highest in butterfat production were selected.

TABLE 4.—*Ten registered Ayrshire sires proved in dairy-herd-improvement associations*

Name and number of sire	Daughter-dam comparisons	Average butterfat production of daughters		Increase over dams
		Number	Pounds	
Penshurst Donell 55200	15	519	112	
Deepwells Conquistadore 43956	14	491	63	
Penshurst True Line 54152	10	468	74	
Hawkswood's Romeo 55277	11	465	66	
Sycamore Jim 46596	10	456	131	
Jessie's Leto Lad of Newark 60920	11	455	46	
Penshurst Man O'War 30th 51943	19	448	109	
Penshurst Del Favorite 58159	15	438	42	
Penshurst Gerald 38087	11	434	119	
Whitpain Martyr 54174	24	433	82	

BROWN SWISS

ORIGIN AND HISTORY

The original home of the Brown Swiss breed is in Switzerland, where the breed has been developed during many centuries. It is probably one of the oldest in existence, and it is thought that no outside blood has been introduced since records began.

IMPORTATION AND DISTRIBUTION

The first importation of Brown Swiss into the United States was made in Massachusetts in 1869, and the next was made in 1882. Several small importations have been made since, but there have been only a few importations since 1906 because of regulations resulting from the prevalence of foot-and-mouth disease in Europe. It is es-

timated that on January 1, 1948, there were approximately 120,250 living registered Brown Swiss cattle in the United States,² but the total number (registered and grade) is not known. Brown Swiss are found in nearly all States, the largest numbers being in Wisconsin, Illinois, Iowa, Minnesota, Michigan, New York, Ohio, and Pennsylvania.

GENERAL CHARACTERISTICS

The score cards for bulls and cows adopted by the Purebred Dairy Cattle Association describe the Brown Swiss characteristics as follows:

Color.—A shade of brown varying from a silver to a dark brown. Hair inside ears is a lighter color than body. Nose and tongue black, with a light colored band around nose. Color markings which bar registry are: White switch, white on sides, top head or neck and legs above knees or hocks. White on belly or lower legs objectionable.

Size.—Strong and vigorous. Size and ruggedness with quality desired. Extreme refinement undesirable. A mature cow in milk should weigh about 1,400 pounds. A mature bull in breeding condition should weigh about 1,900 pounds.

Horns.—Inclining forward and slightly up. Moderately small at base, medium length, tapering toward black tips.

The large frame of the Brown Swiss cattle (figs. 5, 6, and 7) indicates that they have been developed for service as draft animals as well as for milk. The calves weigh from 65 to 90 pounds at birth. The heifers are slow in maturing.



FIGURE 5.—Brown Swiss bull, Curtiss Candy Signal Ned 64837. Grand champion, Dairy Cattle Congress, 1947.

² See footnote 1, p. 10.

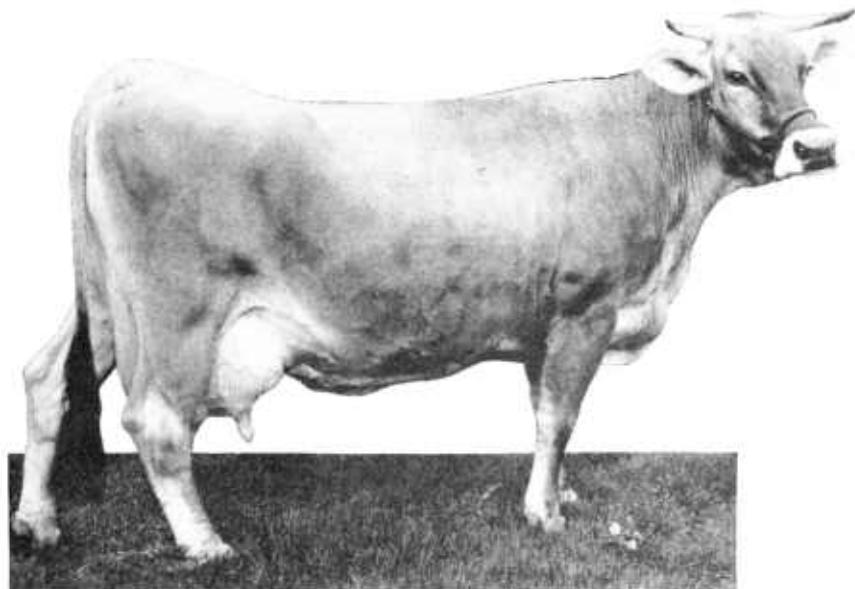


FIGURE 6.—Brown Swiss cow, Illini Nellie 26578. Highest milk and butterfat producer of the breed in the United States.

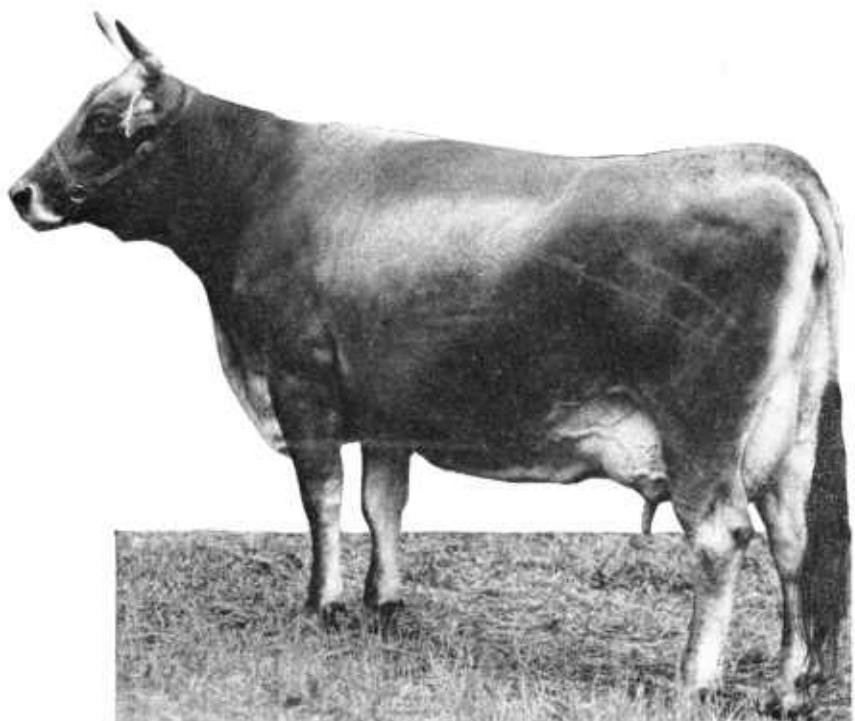


FIGURE 7.—Brown Swiss cow, Marinda Jane of Lee's Hill 90074. Grand Champion, Dairy Cattle Congress, 1947.

PRODUCTION

The Brown Swiss produce milk of average quality as compared with the other breeds of dairy cattle. The 3,928 cows and heifers that had completed official yearly and 305-day production records and had been admitted to the Register of Production up to October 1, 1947, had an average production per cow of 12,592 pounds of milk and 509 pounds of butterfat, with an average test of 4.04 percent.

Under herd-improvement rules, Brown Swiss cows and heifers had completed 11,982 records up to October 1, 1947, with an average production of 9,478 pounds of milk and 375 pounds of butterfat, with a test of 3.96 percent.

The 10 highest milk records and the 10 highest butterfat records made by Brown Swiss cows up to January 1, 1948, and the conditions under which the records were made, are given in table 5.

TABLE 5.—*The 10 highest milk records and the 10 highest butterfat records made by Brown Swiss cows, up to January 1, 1948*

MILK

Cow	Age when record began		Days milked	Daily milkings	Production
	Yr.	Mo.			
Illini Nellie 26578-----	8	4	365	3	29, 569. 5
Mary's Nell 36395-----	7	0	365	4	29, 487. 2
Illini Nellie 26578-----	9	10	365	3	27, 897. 6
Swiss Valley Girl 10th 7887-----	12	5	365	4	27, 513. 6
Believe 4245-----	13	6	365	4	25, 847. 8
Belle's Blue 61553-----	10	0	365	3	25, 509. 3
Royal's Dominie of Lee's Hill 66540-----	9	2	365	2	25, 437. 2
Marina of Lee's Hill 90062-----	7	4	305	3	24, 994. 0
Royal's Dominie of Lee's Hill 66540-----	7	7	365	3	24, 978. 4
Ena's Betty Ann 65619-----	7	10	365	3	24, 900. 2

BUTTERFAT

Illini Nellie 26578-----	8	4	365	3	1, 200. 41
Mary's Nell 36395-----	7	0	365	4	1, 109. 71
Swiss Valley Girl 10th 7887-----	12	5	365	4	1, 106. 33
Jane of Vernon 29496-----	4	8	365	4	1, 075. 58
Gypsie Jane of Lee's Hill 98789-----	4	11	365	3	1, 066. 92
Illini Nellie 26578-----	9	10	365	3	1, 062. 80
June's College Girl 11427-----	6	0	365	4	1, 062. 30
Royal's Dominie of Lee's Hill 66540-----	7	7	365	3	1, 056. 54
Royal's Dominie of Lee's Hill 66540-----	9	2	365	2	1, 047. 93
June's College Girl 11427-----	10	7	365	4	1, 043. 02

BULLS

Table 6 lists 10 registered Brown Swiss bulls that were proved in dairy-herd-improvement associations and reported in the Bureau of Dairy Industry proved-sire lists, published by the United States De-

partment of Agriculture up to January 1, 1948. For a bull to be considered for inclusion in this table, he must have met the following requirements:

(1) He must have had 10 or more unselected daughters with production records, whose dams also had production records.

(2) His daughters must have had an average 305-day butterfat production which exceeded that of the dams by 25 or more pounds.

Records of the daughters and of their dams were converted where necessary to a twice-a-day milking, 6-year-old basis, and if a cow had more than one record, the average of all her records was taken.

From the sires that met these conditions the 10 whose daughters average the highest in butterfat production were selected.

TABLE 6.—*Ten registered Brown Swiss sires proved in dairy-herd-improvement associations*

Name and number of sire	Daughter-dam comparisons	Average butterfat production of daughters		Increase over dams
		Number	Pounds	
Lauretta's Barbette J. B. 44389	10	579	146	
Rosie's Lad of C. M. 43762	10	516	99	
Cinderella's Duke 33801	10	515	92	
Privet's Royal Junior of Lee's Hill 37565	10	515	59	
Gail's Royal of Lee's Hill 42947	16	509	51	
Royal Jane's Max of Vernon 43976	23	495	60	
Geno's Carl of Mt. Vernon 25090	13	494	57	
Illini Nellie Design 29090	10	489	76	
Blankus Baronet of Walhalla 30445	13	486	72	
Louie of Bowerhome 26539	13	482	43	

GUERNSEY

ORIGIN AND HISTORY

The Guernsey breed originated in the Channel Islands, near the north coast of France. It is thought that this breed was developed from a cross between the large red and brindle cattle of Normandy and the small red cattle of Brittany, in France. The exact date of origin is unknown, but it was probably in the latter part of the seventeenth century or before.

All the cattle in the Channel Islands were at one time known as Alderneys. After laws had been enacted forbidding the importation of cattle from the Continent or between the islands of Guernsey and Jersey, two distinct breeds came to be recognized. The one on the islands of Alderney, Sark, and Guernsey became known as the Guernsey breed and the one on Jersey Island as the Jersey breed. The first score card for Guernseys was adopted on the Isle of Guernsey in 1817.

IMPORTATION AND DISTRIBUTION

The first Guernseys whose ancestors could be recorded in the American Guernsey Cattle Club Register were brought to the United States in 1830. A few more were imported in the next two decades, but not until 1870 were extensive importations made. The American Guernsey Cattle Club was formed in 1877. Since that time importations have been made nearly every year except when there were no shipments because of the war.

It is estimated that there were approximately 404,200 living registered Guernseys in the United States on January 1, 1948,³ but the total number (registered and grade) is not known. Guernseys are found in all of the States but are most numerous in Wisconsin, Ohio, Michigan, Indiana, Maryland, Virginia, and Illinois.

GENERAL CHARACTERISTICS

The score card for bulls and cows adopted by the Purebred Dairy Cattle Association describe the characteristics of Guernseys (figs. 8, 9, and 10) as follows:

Color.—A shade of fawn with white markings clearly defined, black or brindle markings objectionable. Skin should show golden yellow pigmentation. When other points are equal, a clear or buff muzzle will be favored over a smoky or black muzzle.

Size.—A mature cow in milk should weigh about 1,100 pounds. A mature bull in breeding condition should weigh about 1,700 pounds. The calves at birth weigh from 55 to 85 pounds.

Horns.—Inclining forward, small and yellow at base, refined, medium in length and tapering toward tips.

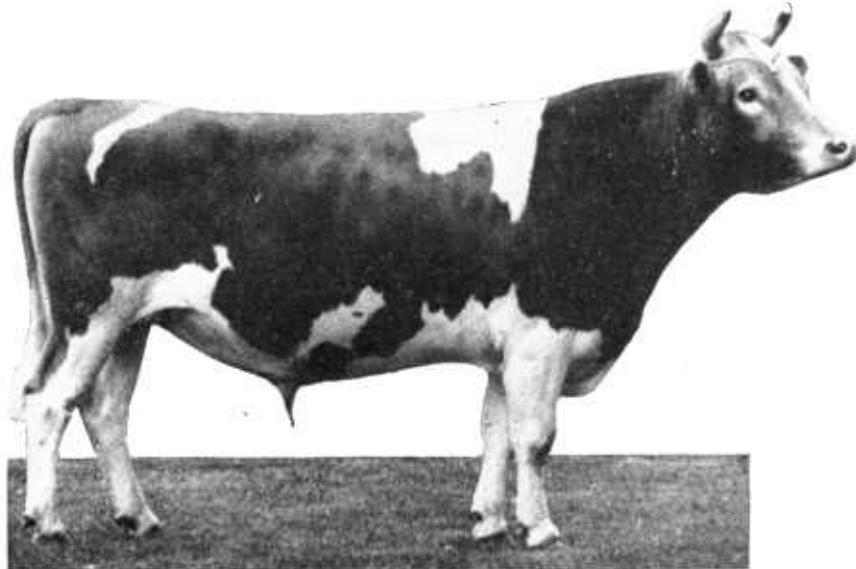


FIGURE 8.—Guernsey bull, Argilla Beacon 33SS35. Grand Champion, National Guernsey Show, 1947.

³ See footnote 1, p. 10.

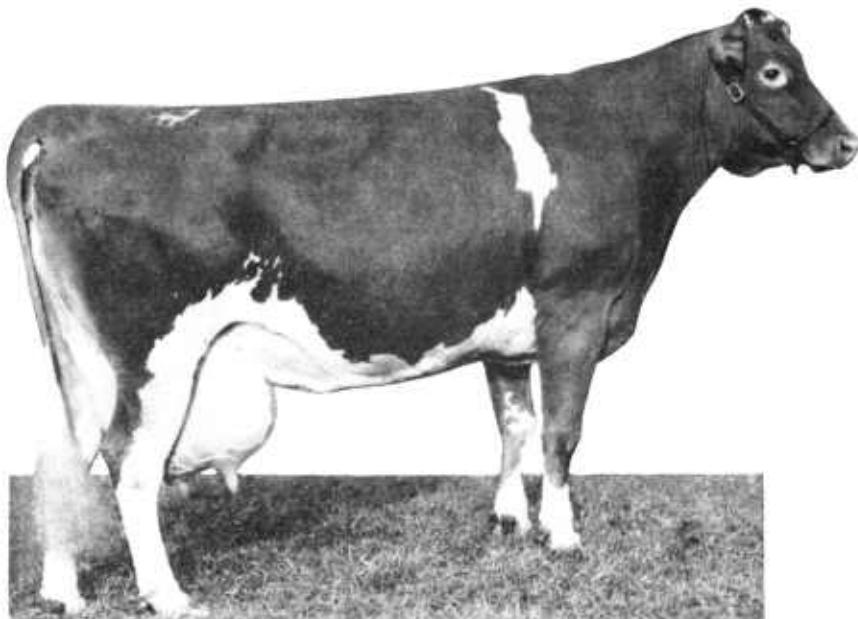


FIGURE 9.—Guernsey cow, Cathedral Rosalie 334299. Highest butterfat producer of the breed in the United States.

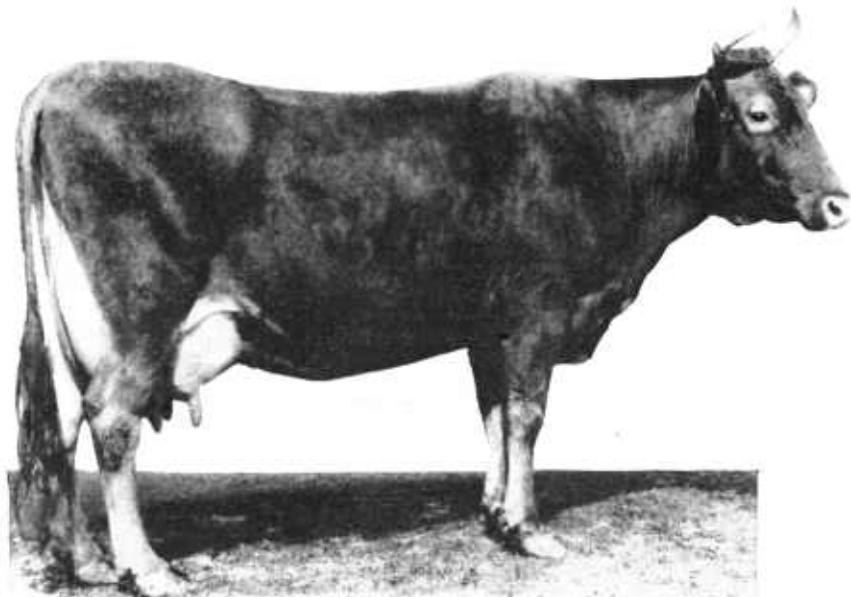


FIGURE 10.—Guernsey cow, Murnie Cowan 19597. Highest milk producer of the breed in the United States.

PRODUCTION

Guernsey milk usually carries a high percentage of butterfat and a yellow color.

The 100,448 Guernsey cows and heifers of all ages that had completed official yearly and 305-day production records in the Advanced Registry up to October 1, 1947, had an average production per cow of 10,079 pounds of milk and 499 pounds of butterfat, with an average test of 5.0 percent.

Under herd-improvement rules, Guernsey cows and heifers had completed 36,840 records up to January 1, 1948, with an average production of 8,208 pounds of milk and 399 pounds of butterfat, with a test of 4.8 percent.

The 10 highest milk records and the 10 highest butterfat records made by Guernsey cows up to January 1, 1948, and the conditions under which the records were made, are given in table 7.

TABLE 7.—*The 10 highest milk records and the 10 highest butterfat records made by Guernsey cows, up to January 1, 1948*

MILK

Cow	Age when record began		Days milked	Daily milkings	Production
	Yr.	Mo.			
Murne Cowan 19597	8	9	365	4	24,008
Cathedral Rosalie 334299	5	0	365	3	23,714
Grassland Zenoria 185315	6	6	365	3	22,848
Flying Horse Royal Rose 641767	6	0	365	3	22,558
Girl of Connemara Farms 539827	6	10	365	3	22,407
Frankland Giralda 466022	8	2	365	3	22,367
Happyholme Anson's Sugar 412240	7	2	365	3	22,046
Sunny Valley's Favorite 559287	5	0	365	3	22,012
Topsy of Thousand Springs 137339	6	9	365	4	22,000
Pet of LaGrange 2d 48429	13	0	365	3	21,967

BUTTERFAT

Cathedral Rosalie 334299	5	0	365	3	1,213
Noranda's Milkmaid 266975	7	0	365	3	1,155
Flying Horse Royal Rose 641767	6	0	365	3	1,154
Anesthesia Faith of Hill Stead 114354	4	11	365	3	1,112
Tarbell Farms Royal Lenda 467961	4	0	365	3	1,109
St. Albans Count's Hale Spot 607390	7	5	365	4	1,106
Countess Prue 43785	6	11	365	3	1,103
Murne Cowan 19597	8	9	365	4	1,098
C. F.'s Mint Julip 482422	6	8	365	3	1,090
Nancy Hanks of Silver Maples 380583	7	8	365	3	1,087

BULLS

Table 8 lists 10 registered Guernsey bulls that were proved in dairy-herd-improvement associations and reported in the Bureau of Dairy Industry proved-sire lists, published by the United States

Department of Agriculture up to January 1, 1948. For a bull to be considered for inclusion in this table, he must have met the following requirements:

(1) He must have had 10 or more unselected daughters with production records, whose dams also had production records;

(2) His daughters must have had an average 305-day butterfat production which exceeded that of the dams by 25 or more pounds.

Records of the daughters and their dams were converted where necessary to a twice-a-day milking, 6-year-old basis, and if a cow had more than one record, the average of all her records was taken.

From the sires that met these conditions the 10 whose daughters average the highest in butterfat production were selected.

TABLE 8.—*Ten registered Guernsey sires proved in dairy-herd-improvement associations*

Name and number of sire	Daughter-dam comparisons	Average butterfat production of daughters		Increase over dams
		Number	Pounds	
Florham Superior 70439	29	518	131	
Ridglydale's Alert Challenger 248732	10	512	100	
Troutmere Zeke 217068	10	509	31	
Chincona Houdan 218677	16	501	39	
Sunnyvale Sun 103167	13	495	49	
Hasty Pudding of Whimsy Farm 219292	26	493	49	
Argilla Catamount 219182	10	492	34	
Valkyrie King's Laddie 252169	10	491	99	
Tarbell Farms Peerless Beacon 280020	10	489	42	
Liberty's Starlight 211327	12	488	81	

HOLSTEIN-FRIESIAN

ORIGIN AND HISTORY

The cattle from which our present Holstein-Friesian breed has descended were developed in the northern part of the Netherlands, especially in the Province of Friesland, and in the neighboring Provinces of northern Germany. The time of their origin as a recognized distinct breed is unknown, but it is probable that they have been selected for their dairy qualities for about 2,000 years.

Before 1885 there were two associations furthering the interests of this breed in the United States. One maintained a Holstein herdbook, and the other a Dutch-Friesian herdbook. In 1885 the two associations were combined into the Holstein-Friesian Association of America, and from that time on only one herd register has been maintained. This is known as the Holstein-Friesian herdbook. While the official name of the breed is Holstein-Friesian, the single word "Holstein" is more common in ordinary use.

IMPORTATION AND DISTRIBUTION

The first importations of Holsteins into the United States were made in 1795, and afterwards a few were brought in from time to time up to 1879, following which heavy importations were made each year until 1887. Thereafter only a few were imported up to 1905, and since then, because of the prevalence of foot-and-mouth disease in Europe, very few have been imported.

It is estimated that there were approximately 780,800 living registered Holsteins in the United States on January 1, 1948,⁴ but the total number (registered and grade) is not known. Holstein cattle are found throughout all the 48 States, though by far the largest numbers are in New York, Wisconsin, Pennsylvania, Michigan, Ohio, and Illinois, in the order named. These 6 States probably contain more than 60 percent of the registered Holstein cattle in the United States.

GENERAL CHARACTERISTICS

The Holsteins (figs. 11, 12, and 13) are the largest of the dairy breeds. The score cards for bulls and cows adopted by the Purebred Dairy Cattle Association describe the Holstein characteristics as follows:

Color.—Black and white markings clearly defined. Color markings which bar registry are solid black, solid white, black in switch, black belly, black encircling leg touching hoof, black from hoof to knee or hock, black and white intermixed to give color other than distinct black and white.

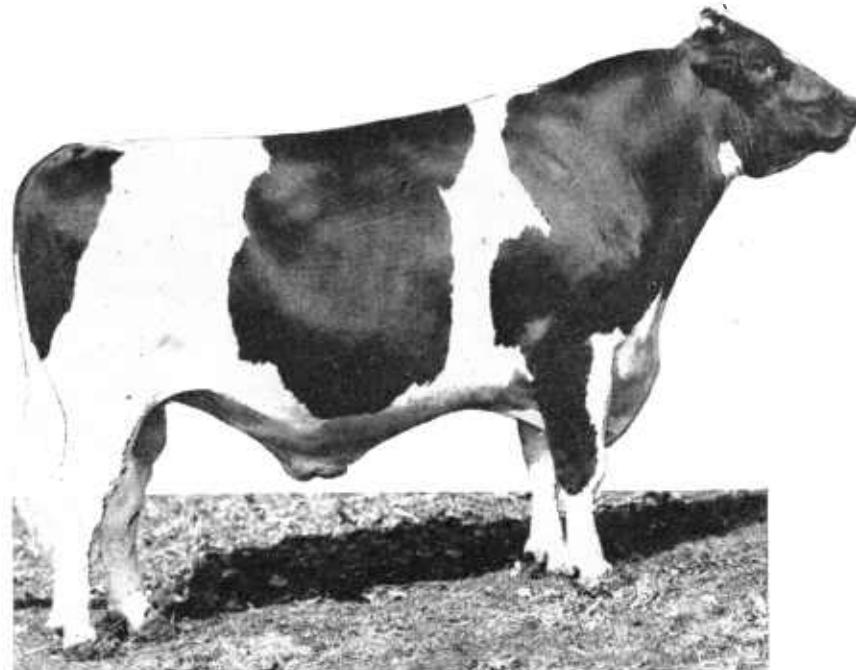


FIGURE 11.—Holstein bull, Framlo Chip Douglas King 864931. Grand Champion, Dairy Cattle Congress, 1947.

⁴ See footnote 1, p. 10.

Size.—A mature cow in milk should weigh about 1,500 pounds. A mature bull in breeding condition should weigh about 2,000 pounds. Calves at birth weigh from 70 to 105 pounds.

Horns.—Inclining forward, incurving, small at base, refined, medium length and tapering toward tips.

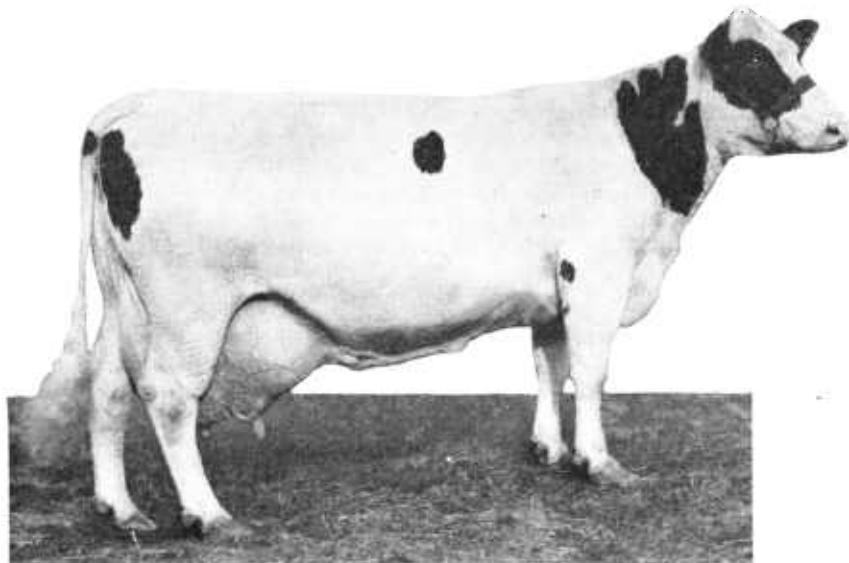


FIGURE 12.—Holstein cow, Carnation Ormsby Butter King 1165152. This cow held the highest yearly butterfat record of all the breeds in the United States up to January 1, 1948.

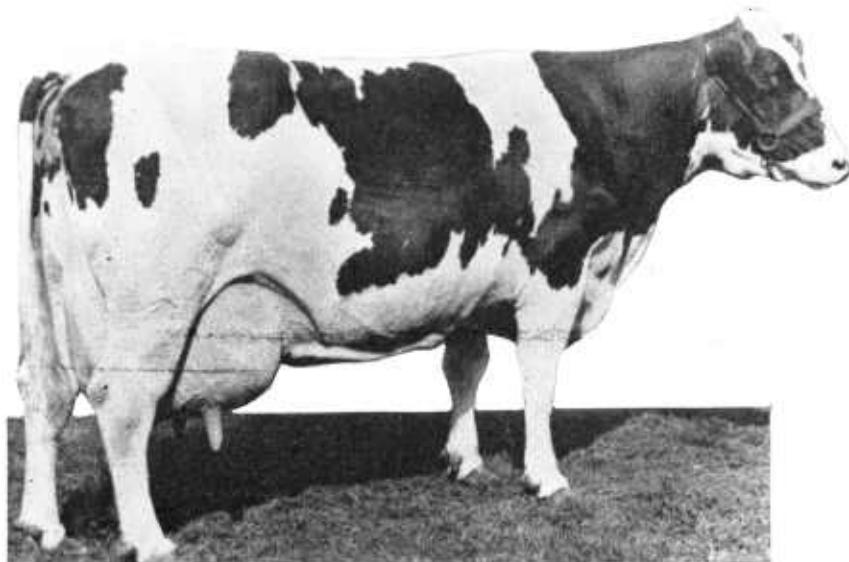


FIGURE 13.—Holstein cow, Carnation Ormsby Madcap Fayne 1639621. This cow held the highest yearly milk record of all the breeds in the United States up to January 1, 1948.

PRODUCTION

The Holsteins produce a large quantity of milk with a comparatively low butterfat content.

The 80,290 Holstein cows and heifers of all ages that had completed official yearly and 10-month production records in the Advanced Registry up to October 1, 1947, had an average production per cow of 15,748 pounds of milk and 544 pounds of butterfat, with an average test of 3.45 percent.

In the Herd Improvement Registry, up to October 1, 1947, 8,326 Holstein herds containing 191,599 cows had completed yearly records, and these records averaged 11,243 pounds of milk and 391 pounds of butterfat, with an average test of 3.48 percent.

The 10 highest milk records and the 10 highest butterfat records made by Holstein cows up to January 1, 1948, and the conditions under which the record were made, are given in table 9.

TABLE 9.—*The 10 highest milk records and the 10 highest butterfat records made by Holstein cows, up to January 1, 1948*

MILK

Cow	Age when record began		Days milked	Daily milkings	Production
	Yr.	Mo.			
Carnation Ormsby Madcap Fayne 1639621	8	4	365	4	41, 943
Carnation Ormsby Butter King 1165152	8	5	365	4	38, 607
Carnation Ormsby Madcap Fayne 1639621	5	10	365	4	37, 506
Segis Pietertje Prospect 221846	6	8	365	4	37, 381
Carnation Prospect Veeman 799610	8	7	365	4	36, 859
Carnation Ormsby Madcap 1554602	6	3	365	4	36, 851
Helm Veeman Woorderest 486877	4	8	365	4	36, 218
Carnation Ormsby Nellie 1326284	6	2	365	4	35, 887
Lady Pride Pontiac Lieuwkje 849602	8	0	365	4	35, 627
Kolrain Marion Finderne 317396	6	1	365	4	35, 340

BUTTERFAT

Carnation Ormsby Butter King 1165152	8	5	365	4	1, 402. 0
Carnation Ormsby Madcap Fayne 1639621	8	4	365	4	1, 392. 4
De Kol Plus Segis Dixie 295135	9	1	365	4	1, 349. 3
Carnation Homestead Inka Mutual 1820797	7	8	365	4	1, 333. 8
Carnation Ormsby Nellie 1326284	6	2	365	4	1, 328. 8
Calamity Nig of Elmwood Farms 1560447	8	7	365	4	1, 327. 9
Carnation Ormsby Madcap 1554602	6	3	365	4	1, 313. 0
Carnation Ormsby Madcap Fayne 1639621	5	10	365	4	1, 306. 1
Carnation Ormsby Segis Beauty 1203395	7	8	365	4	1, 290. 4
Daisy Aaggie Ormsby 3d 571569	7	5	365	4	1, 286. 2

BULLS

Table 10 lists 10 registered Holstein bulls that were proved in dairy-herd-improvement associations and reported in the Bureau of Dairy Industry proved-sire lists, published by the United States Department of Agriculture up to January 1, 1948. For a bull to be considered for inclusion in this table, he must have met the following requirements:

(1) He must have had 10 or more unselected daughters with production records, whose dams also had production records.

(2) His daughters must have had an average 305-day butterfat production which exceeded that of the dams by 25 or more pounds.

Records of the daughters and of their dams were converted where necessary to a twice-a-day milking, 6-year-old basis, and if a cow had more than one record, the average of all her records was taken.

From the sires that met these conditions the 10 whose daughters average the highest in butterfat production were selected.

TABLE 10.—*Ten registered Holstein-Friesian sires proved in dairy-herd-improvement associations*

Name and number of sire	Daughter-dam comparisons	Average butterfat production of daughters	Increase over dams
	Number	Pounds	Pounds
Lakefield King Ventnor Fobes 732743-----	14	601	97
King Bessie Ormsby Pietertje 86th 688263-----	12	599	61
King Champion Jannek 18th 460879-----	17	598	128
King Superb of Ventnor 762100-----	12	580	82
Carnation Governor Inka Veeman 730828-----	21	575	45
Dad Boast Colantha Ormsby 775316-----	12	573	111
Carnation Peerless Segis 700150-----	14	573	84
Sir Taylaker Ormsby Gettie 686679-----	24	570	85
Seven X Klaver Lad 783616-----	12	553	89
Mohofar Colantha Ormsby 617203-----	11	547	102

JERSEY**ORIGIN AND HISTORY**

The Jersey breed originated in the Island of Jersey, one of the group of Channel Islands, between England and France. In 1789 a law was passed prohibiting the importation of cattle into Jersey Island except for immediate slaughter. Shortly afterwards the cattle on that island became known by the name of Jersey instead of Alderney. No outside blood has been introduced since that time.

IMPORTATION AND DISTRIBUTION

The first importation of Jerseys into the United States was made in 1850. A few more were brought over about 20 years later, and from

1870 to 1890 there were numerous importations. Since 1890 many Jerseys have been imported every year, except during the war years.

It is estimated that there were approximately 319,000 living registered Jerseys in the United States on January 1, 1948,⁵ but the total number (registered and grade) is not known. Jerseys are more evenly distributed among the States than any other dairy breed, with the South having the greatest concentration.

GENERAL CHARACTERISTICS

The score cards for bulls and cows adopted by the Purebred Dairy Cattle Association describe the Jersey characteristics as follows:

Color.—A shade of fawn, with or without white markings.

Size.—A mature cow in milk should weigh about 1,000 pounds. A mature bull in breeding condition should weigh about 1,500 pounds.

Horns.—Inclining forward, incurving, small at base, refined, medium length and tapering toward tips.

The Jersey (figs. 14, 15, and 16) is the smallest of the breeds discussed in this bulletin. The calves weigh from 40 to 75 pounds at birth. The heifers develop rapidly and usually mature sufficiently to calve the first time at 24 months of age.

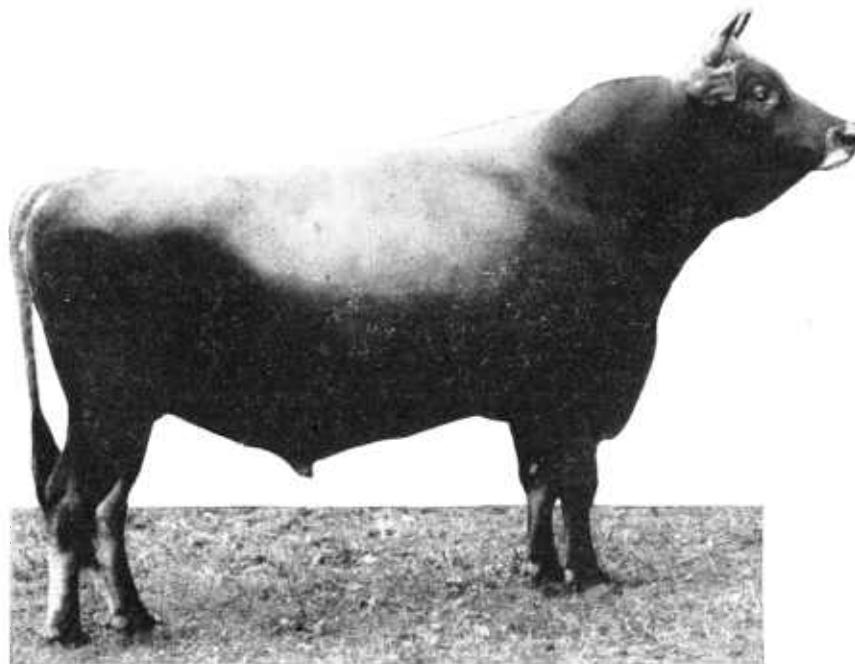


FIGURE 14.—Jersey bull, Draconis Royal Baron 460155. Grand Champion, All American Jersey Show, 1947.

⁵ See footnote 1, p. 10.

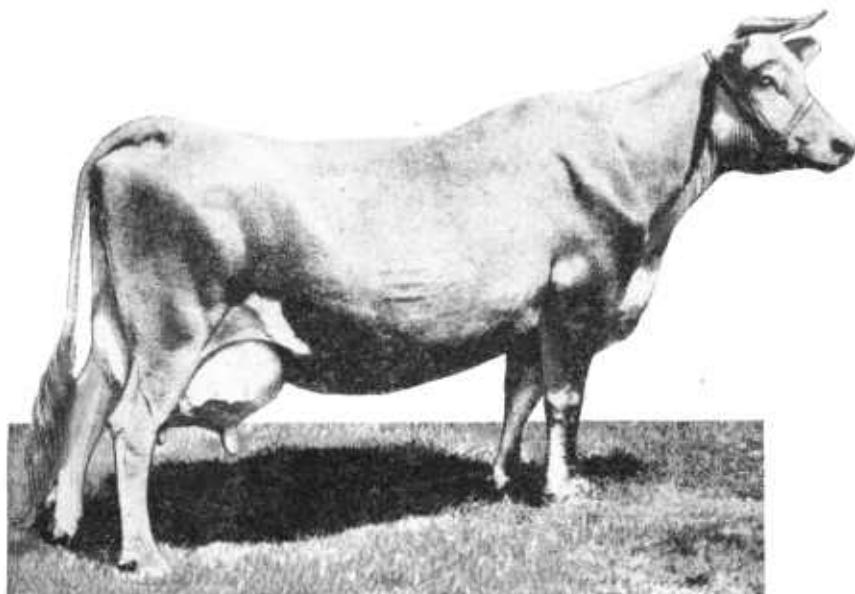


FIGURE 15.—Jersey cow, Abigail of Hillside 457241. Highest milk producer of the breed in the United States.

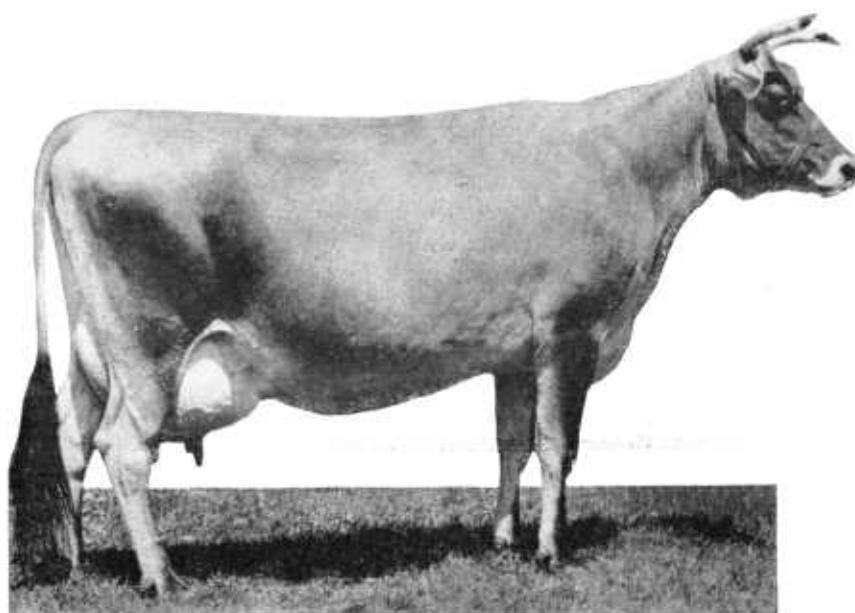


FIGURE 16.—Jersey cow, Stockwell's April Pogis of H. P. 694544. Highest butterfat producer of the breed in the United States.

PRODUCTION

Jersey milk usually is high in color and also high in percentage of butterfat.

The 78,226 Jersey cows and heifers of all ages that had completed official yearly and 305-day Register of Merit production records up to April 1, 1947, had an average production per cow of 8,636 pounds of milk and 463 pounds of butterfat, with an average test of 5.36 percent.

Under herd-improvement rules, Jersey cows and heifers had completed 127,544 records up to April 1, 1947, with an average production of 7,037 pounds of milk and 377 pounds of butterfat, with a test of 5.36 percent.

The 10 highest milk records and the 10 highest butterfat records made by Jersey cows up to January 1, 1948, and the conditions under which the records were made, are given in table 11.

TABLE 11.—*The 10 highest milk records and the 10 highest butterfat records made by Jersey cows, up to January 1, 1948*

MILK

Cow	Age when record began		Days milked	Daily milkings	Production
	Yr.	Mo.			
Abigail of Hillside 457241-----	8	6	365	3	28, 677
Madeline of Hillside 389336-----	8	3	365	3	20, 624
Fauvic's Star 313018-----	6	11	365	3	20, 616
Abigail of Hillside 457241-----	5	1	365	3	20, 359
Opal Crystal Lady 1386634-----	5	2	365	2	20, 084
Fauvic Ruth 385463-----	7	5	365	3	19, 805
Red Lady 396118-----	9	9	365	(1)	19, 608
Welcome Volunteer Tiff 1316589-----	3	11	365	(2)	19, 416
Missionary Noble Alice 1199012-----	8	5	305	(3)	19, 390
Dream Noble Blanche Ixia 1308625-----	3	8	365	(4)	19, 129

BUTTERFAT

Stockwell's April Pogis of H. P. 694544-----	8	3	365	3	1, 218
Abigail of Hillside 457241-----	8	6	365	3	1, 198
Welcome Volunteer Sable 1305780-----	5	2	365	(5)	1, 144
Darling's Jolly Lassie 435948-----	4	0	365	3	1, 141
Dairylike Star Dolly 1099469-----	5	0	365	3	1, 132
Groff's Constance 367292-----	5	8	365	3	1, 130
Josephus' C. B. Lady Girl 1358485-----	5	11	365	2	1, 128
Princess Emma of H. S. F. 359390-----	6	3	365	3	1, 110
Mayflower's Pogis Surprise 705971-----	8	0	365	3	1, 105
Volunteer Shining Pearl 1178968-----	7	10	365	3	1, 081

¹ Milked 4 times a day for 56 days; 3 times a day for 309 days.

² Milked 3 times a day for 316 days; 2 times a day for 49 days.

³ Milked 4 times a day for 299 days; 3 times a day for 6 days.

⁴ Milked 3 times a day for 291 days; 2 times a day for 74 days.

⁵ Milked 3 times a day for 304 days; 2 times a day for 61 days.

BULLS

Table 12 lists 10 registered Jersey bulls that were proved in dairy-herd-improvement associations and reported in the Bureau of Dairy Industry proved-sire lists, published by the United States Department of Agriculture up to January 1, 1948. For a bull to be considered for inclusion in this table, he must have met the following requirements:

- (1) He must have had 10 or more unselected daughters with production records, whose dams also had production records.
- (2) His daughters must have had an average 305-day butterfat production which exceeded that of the dams by 25 or more pounds.

Records of the daughters and of their dams were converted where necessary to a twice-a-day milking, 6-year-old basis, and if a cow had more than one record, the average of all her records was taken.

From the sires that met these conditions, the 10 whose daughters average the highest in butterfat production were selected.

TABLE 12.—*Ten registered Jersey sires proved in dairy-herd-improvement associations*

Name and number of sire	Daughter-dam comparisons		Average butterfat production of daughters	Increase over dams
	Number	Pounds		
Lord Dreamer 397562	20	546	98	
Gamboge Oxford Flash Lad 406492	12	542	63	
High Lawn Torono Siegfried 376677	16	537	75	
Pauline's Missionary 370287	23	519	75	
Winnona's Pogis Chief 341773	12	506	26	
Josephine's Royal King 250214	104	502	35	
Floss' Duke's Model 369058	14	502	35	
California Nick Kid 398167	15	501	53	
Gapon's Countess' Lad 159969	19	496	36	
It of Meridale 406501	14	494	47	

THE AMERICAN DAIRY CATTLE CLUB

The American Dairy Cattle Club, which was organized under the laws of the State of Illinois, filed its certificate of organization November 14, 1936. According to its bylaws this club was formed to improve the dairy cattle of the United States, regardless of color or previous breeding, through the practice of continuously testing the production of females and proving bulls, in the herds of both members and nonmembers under rules established by the board of directors.

The recording system consists of five orders. Each order represents a generation, starting with the First (or lowest) and progressing to the Fifth (or highest) Order. No ancestry or pedigree record is required for the First Order, but for recording in all higher orders, with few exceptions, there is a pedigree as well as a performance requirement. All performance requirements for females are based on

a twice-a-day milking, 305-day record, calculated to maturity, and for bulls on an intermediate index of milk production and percentage of butterfat from at least five dam-and-daughter pairs, based on such records. The requirements for recording are given in table 13.

TABLE 13.—*Requirements for recording cows and bulls in American Dairy Cattle Club record*

Order	Pedigree requirements for recording cow or bull	Performance requirements for recording—	
		Cows (record of butterfat production)	Bulls (proved-sire index of butterfat production)
First Order-----	No pedigree requirement-----	<i>Pounds</i> (³)	<i>Pounds</i> 375
Second Order-----	Parents must be recorded in at least the First Order. ¹	350	400
Third Order-----	Parents must be recorded in at least the Second Order. ²	375	425
Fourth Order-----	Parents must be recorded in at least the Third Order.	400	450
Fifth Order-----	Parents must be recorded in at least the Fourth Order.	425	475

¹ The pedigree requirement for recording a bull in the Second Order is waived in the case of any dairy bull with a 10-pair index of 450 pounds of butterfat.

² The pedigree requirement for recording a bull in the Third Order is waived in the case of any bull with a 15-pair index of 500 pounds of butterfat.

³ The performance requirement for recording a cow in the First Order is waived in the case of any cow with two daughters each having a record of at least 300 pounds of butterfat. (Must have a complete lactation record, no quantity requirement.)

Seventy-two animals had been recorded in the Fourth Order and three cows had been recorded in the Fifth Order up to May 1, 1948.

THE PUREBRED DAIRY CATTLE ASSOCIATION

The Purebred Dairy Cattle Association was organized in 1940. Membership is limited to recognized clubs, societies, and associations engaged in maintaining registers of purebred dairy cattle. Each such organization has three representatives.

The object of the association in general is to increase the interest of all dairymen in purebred dairy cattle, first, by cooperatively making available data showing the economic need for and the value of the registered dairy animal; secondly, by cooperating with and assisting agricultural educational institutions in the United States in such projects and programs as will encourage the breeding of better dairy cattle through the use of purebred seed stock; and thirdly, by originating

or participating in activities which will advance the interests of purebred registered dairy cattle.

Some of the major projects which the association has sponsored or adopted are: (1) Uniform rules for official testing; (2) classification for each breed of dairy cattle at State fairs; (3) rules and regulations governing artificial insemination in purebred dairy herds; and (4) code of ethics for public and private sales.

The membership of this association on January 1, 1948, consisted of five national breed associations representing the following breeds: Ayrshire, Brown Swiss, Guernsey, Holstein, and Jersey.

BREED ASSOCIATIONS

The various national breed associations and clubs maintain offices and forces whose duty it is (1) to keep the herdbooks for their respective breeds; (2) to keep a record of the animals that have qualified for the additional registration because of meritorious performance; and (3) to further the interest of the breed in other ways. The official names of these organizations, the names of their respective secretaries, and their addresses are as follows:

The American Guernsey Cattle Club, Karl B. Musser, secretary, Peterborough, N. H.

The American Jersey Cattle Club, Floyd Johnston, secretary, Columbus 15, Ohio.

The Ayrshire Breeders' Association, C. T. Conklin, secretary, Brandon, Vt.

The Brown Swiss Cattle Breeders' Association, Fred S. Idtse, secretary, Beloit, Wis.

The Holstein-Friesian Association of America, H. W. Norton, Jr., secretary, Brattleboro, Vt.

The American Dairy Cattle Club, Leland W. Lamb, secretary, 213 East Seneca Street, Ithaca, N. Y.

The Purebred Dairy Cattle Association, G. A. Bowling, secretary, Port Chester, N. Y.